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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,947	09/01/2001	Wu-Niang Feng	1641008	2762

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Keith Kline
PRO-TECHTOR INTERNATIONAL SERVICES
20775 Norada Court
Saratoga, CA 95070-3018

EXAMINER

DUONG, THANH P

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,947

Applicant(s)

FENG, WU-NIANG

Examiner

Tom P Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Applicants' remarks and amendments filed on September 17, 2004 have been carefully considered. Claims 1-9 have been canceled. New claims 10-15 have been added. Claims 10-15 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartz (5,603,905) in view of Haldeman (2,545,028) and Kleeberg et al. (4,304, 570). Bartz discloses a semiconductor waste-gas treating apparatus (Fig. 3) having the ability of preventing sedimentation and etching of filth (Col. 5, lines 38-40), said apparatus comprises a header (steel plate 41 supporting tubes 42 and 44) and a waste gas treating trough (51) mounted below said header and having at the center thereof a reaction room (31), and is characterized by: said reaction room is surrounded by a water receiving chamber outside (51) of it, said water receiving chamber is provided on the top thereof with an annular spillway (wall between 50 and 51) in communicating with said reaction room (31), water in said smoothly and uniformly distributed to said water

receiving chamber is annular spillway, and spills to said reaction room to form an annular water wall on the wall of said reaction room; and a water receiving chamber 51 with a water inlet (52) and water discharge outlet (55). Bartz '905 fails to disclose annular guide in which said waste gas treating trough is mounted below said header. Haldeman teaches the annular guide (centrally disposed tube 16) located interior of the cylinder 2. The tube 16 facilitates the movement of the fluid in a circular path, which increases the fluid net velocity (Col. 5, lines 17-25). Thus, it would have been obvious in view of Haldeman to one having ordinary skill in the art to modify the waste gas apparatus of Bartz with an annular guide as taught by Haldeman in order to increase the velocity of the water moving downstream, which aids in cleaning and/or prevent the deposition of particulates on the inner wall. Bartz '950 also fails to disclose a sensing probe in the annular spillway to detect the water level in the water receiving chamber. Kleeberg teaches the a sensing probe (level sensor 22) mounted in the chamber 8 to detect the liquid scrubbing level in the vessel. Thus, it would have been obvious in view of Kleeberg to one having ordinary skill in the art to modify the waste gas apparatus of Bartz with the sensing probe as taught by Kleeberg to detect the scrubbing liquid level in the reaction chamber. Regarding claim 14, Bartz discloses a annular spillway (wall between 50 and 51) with no sensing probe. Regarding claim 15, Bartz fails to disclose the annular guide is provided on the top with annular flange. Haldeman teaches the annular guide (centrally disposed tube 16) is threaded to the top flange (plate 14) and the annular guide (tube 16) is supported by the top flange (plate 14). Thus, it would have been

obvious in view of Haldeman to one having ordinary skill in the art to modify the waste gas apparatus of Bartz with an annular guide with supporting top flange as taught by Haldeman in order to provide supporting structure for the annular guide.

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied references as applied to claim 10, above, and further in view of Shular (3,881,874). The applied references fails to disclose a header is provided with a sensing probe to sense the reaction temperature in the reaction room. Shular teaches the temperature sensing probes 40-43 are located in the combustion chambers H and I to measure the temperature of the reaction. Thus, it would have been obvious in view of Shular to one having ordinary skill in the art to modify the waste gas apparatus of the applied references with sensing probes as taught by Shular in order to provide means for measuring the temperature in the gas chamber.

3. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applied references as applied to claim 11, above, and further in view of Suttrop (6,267,585). The applied references in claim 11 disclose the claimed invention except a plurality of hydrogen spraying nozzle with a fire spraying port. Suttrop teaches it is conventional to provide hydrogen injection nozzles with vortex spraying mechanism and such configuration maximizes the flame area or burning surface area in the combustion chamber (Col. 2, lines 26-44). Thus, it

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would have been obvious in view of Suttrop to one having ordinary skill in the art to modify the waste gas apparatus of the applied references with a hydrogen spraying nozzles as taught by Suttrop in order to maximize the burning area in the combustion chamber.

Response to Arguments

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
November 15, 2004

TD


Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700